The British-North American Committee

At the Committee's first meeting in New York City, in December 1969, the following statement of its aims was authorised:

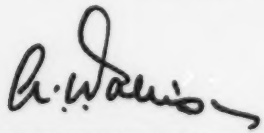
> *The British-North American Committee has been established to study and comment upon the developing relationships between Britain, the United States and Canada. It seeks to promote clearer understanding of the economic opportunities and problems facing the three countries, to explore areas of cooperation and possible friction, and to discover constructive responses. It believes that sound relations between these three countries in the context of an increasingly interrelated world are essential to future prosperity and seeks to promote better understanding through the collection of facts and their widespread dissemination.*

During the 22 years since then, the Committee has broadly maintained these aims and has sponsored a series of objective studies undertaken by qualified experts in the three countries and published with the Committee's approval. On the basis of these factual studies and of discussions at its meetings, the Committee has also issued policy statements signed by its members.

The diversity of issues that the BNAC has addressed is shown by the 44 titles listed on pages 51–53.

The Committee's membership includes business, banking, labour, agricultural, and professional leaders from the United Kingdom, the United States and Canada. The Committee is sponsored by three non-profit research organisations—the British-North American Research Association in London, the National Planning Association in Washington, and the C.D. Howe Institute in Toronto.

The BNAC is a unique organisation both in terms of its broadly diversified membership and in terms of the blending of factual studies and policy conclusions on issues important to the three countries. It meets twice a year, once in the United Kingdom and once in North America. Its work is jointly financed by funds contributed from private sources in the United Kingdom, the United States and Canada. Offices on behalf of the Committee are maintained at 1424 16th Street, N.W., Suite 700, Washington, D.C. 20036, and at Grosvenor Gardens House, 35–37 Grosvenor Gardens, London SW1W 0BS. Dr. Richard Belous in Washington is North American Director of the Committee, and Simon Webley in London is the British Director.



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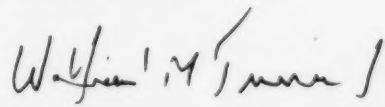

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Co-chairmen of the Committee

92-06703/

The Question of Saving

by Harold Rose

Esmée Fairbairn Visiting Professor of Finance
London Business School

BRITISH-NORTH AMERICAN COMMITTEE

Sponsored by
British-North American Research Association (U.K.)
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Statement of the British-North American Committee to Accompany the Report

The British-North American Committee has been concerned about the issue of saving. How should saving be measured? Why do saving rates in the United States, Canada and the United Kingdom tend to be lower than in, say, Japan? Does it really matter? If so, how should our respective nations alter policies to generate an increase in their national saving rates?

To help the Committee explore the above questions, we asked one of our members, Professor Harold Rose of the London Business School, to write this report.

We endorse his principal conclusion that overall saving rates in our respective countries need to be enhanced in order to sustain economic growth and development. Policies required to do this will differ in each country, and we urge our Finance Ministers and other policymakers to consider seriously the suggestions in the report. We therefore commend the paper to them and all those who are interested in the role of saving in the global economy.

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London

Preface

Saving levels have attracted considerable interest in recent years. At least until a year or two ago, the fall in saving ratios in the 1980s created concern in many countries, and some anxiety remains about the level of personal saving, particularly in the United Kingdom and the United States. Differences in the saving rates of the leading industrial economies, especially between Japan and the United States, have also attracted attention with respect to the balance of payments.

The British-North American Committee asked me to examine these issues and, in the process, to clarify the definition of saving, discuss what determines saving and highlight the policy implications of possibly inadequate saving. I have concentrated on the United States, the United Kingdom and Japan.

The interpretation of changes in saving levels and of differences in saving ratios among countries is unfortunately bedeviled by problems of definition and measurement. I have relied heavily on the saving statistics of the Organisation for Economic Cooperation and Development, which publishes estimates on an international standardised basis. These data have been updated by Barclays Bank Economics Department, for whose help I am grateful. I am also grateful for comments by Professor David Laidler and especially by Professor Sir James Ball, whose past work on saving possesses an originality that this study does not claim.

HAROLD ROSE
February 1991

Chapter I

What Is Saving?

Saving is the difference between "income" (after tax payments) and "current" or "consumption" expenditure. The quotation marks denote that there are different ways of defining these terms, a matter to which I will return.

It is usual to divide a country's saving into that of the various sectors of the economy. The classification of the Organisation for Economic Cooperation and Development (OECD), with one change in definition, follows.

Personal saving is the difference between personal income, less tax and interest payments, and expenditure on consumer goods and services. Because unincorporated business saving is difficult to separate, the OECD includes it in the personal sector, as do most countries' accounts. It should also be noted that personal saving includes the increase in private sector pension and life insurance funds, which are considered the property of their members and policyholders.

The OECD calls the personal saving that is described here "household saving." But it seems more appropriate to reserve that term for saving by households in the narrow sense, excluding saving by unincorporated businesses and pension and life insurance funds. Some countries do make this distinction.

Corporate saving is the difference between corporate profits after interest payments and corporate taxes, on the one hand, and payments to shareholders (mainly dividends), on the other. Corporate saving is retained profits, including depreciation. The OECD classification, unlike that of many countries' own accounts, includes state-owned corporations in the corporate sector.

Private saving is the sum of personal and corporate saving.

Government saving is the difference between the government's "income" or "current" receipts (mainly taxes and interest) and its "current" (i.e., noninvestment) expenditures. The government sector includes state and local governments as well as the central government.

Table 1 shows sector saving trends for the major OECD countries.

Table 1 GROSS SAVING AS A PERCENTAGE OF GROSS NATIONAL PRODUCT AT MARKET PRICES, OECD COUNTRIES

	1960–70	1971–80	1981–87	1986	1987	1988	1989
Total Saving							
US	19.6	19.5	14.4	14.7	14.6	15.2	13.2
Canada	21.8	23.1	17.2	18.5	19.6	21.1	21.5
Japan	35.0	34.4	27.1	32.0	32.5	33.5	36.0
France	26.3	25.4	17.3	19.9	19.5	20.5	20.0
Germany	27.3	23.7	19.2	24.0	23.8	24.6	25.5
Italy	21.0	19.2	15.6	21.3	20.5	20.7	20.5
UK	19.6	21.7	18.4	16.8	16.9	18.2	17.8
21 Countries	23.3	23.5	20.2	19.7	19.6	20.3	20.4
Private Saving							
US	17.7	19.2	17.4	17.9	16.8	17.2	15.2
Canada	18.1	20.7	23.2	22.0	21.9	21.5	22.0
Japan	28.7	29.9	24.7	26.9	25.5	25.2	27.9
France	—	22.0	18.7	19.4	18.1	18.3	18.5
Germany	21.1	20.2	18.3	20.1	20.3	23.2	23.5
Italy	19.7	22.9	21.7	28.2	26.9	27.0	27.5
UK	14.0	18.6	17.1	16.3	16.3	15.0	14.5
17 Countries	19.7	21.0	20.4	—	—	—	—
Corporate Saving							
US	8.4	8.5	9.1	9.2	8.8	8.6	8.2
Canada	10.4	9.8	10.4	11.0	12.0	11.9	12.0
Japan	15.3	11.4	10.9	11.5	11.2	11.1	12.1
France	—	8.3	8.0	10.6	10.2	9.9	10.0
Germany	14.1	11.6	10.5	12.4	12.5	15.3	15.5
Italy	—	4.5	4.5	10.1	9.4	9.5	10.0
UK	8.1	11.4	10.5	12.2	13.1	12.5	11.1
Personal Saving							
US	9.3	10.7	8.3	8.6	8.0	8.6	9.0
Canada	7.7	10.9	12.8	11.0	9.9	9.6	10.0
Japan	13.5	18.5	13.8	15.4	14.3	14.1	15.8
France	—	13.6	10.7	8.8	7.9	8.4	8.5
Germany[a]	7.8	9.7	7.8	7.7	7.8	7.9	7.0
Italy	12.2[a]	18.4	17.2	18.1	17.5	17.5	17.5
UK	6.0	8.9	6.8	4.6	3.2	2.5	3.4
Government Saving							
US	1.8	0.3	–2.4	–3.1	–2.2	–2.1	–2.0
Canada	3.7	2.3	–2.2	–2.5	–1.7	0.0	–0.5
Japan	1.8	0.3	4.4	4.8	6.8	8.1	8.1
France	—	3.5	0.8	0.5	0.6	1.1	1.5
Germany	6.2	3.5	1.8	2.4	1.9	1.4	2.0
Italy	1.3	3.7	–7.6	–7.8	–7.2	–6.7	–7.0
UK	5.6	3.1	1.3	0.0	0.6	3.2	3.3

(a) Net saving (after capital consumption) only. In other countries, net household saving as a percentage of net national product was 2–3 percent below the gross saving ratio in the 1980s.

Sources: OECD National Accounts and Barclays Bank Economics Department.

Saving, like investment, can be expressed on either a gross or a net basis. Net saving is gross saving after deduction of a provision for maintaining capital, that is, after "capital consumption" or depreciation in the economic sense. Because adjustments for net saving are unreliable, and because technical progress is embodied in gross as well as net investment, attention usually focuses on gross saving and investment. It is gross investment that influences economic growth. (Statistics on saving on a net basis are given in the Appendix.)

As defined above, saving must in any period be equal to the acquisition of assets less liabilities in that period (apart from deficiencies of measurement, which in practice are common). The assets acquired may be financial or physical, or both. "Dissaving" takes place when current or consumption expenditures exceed after-tax income. Dissaving must be matched by a net sale of assets or a net increase in liabilities, or both. Consumption is often financed by borrowing, but as long as consumption expenditures remain less than income, this does not imply dissaving. As long as saving is positive, the sector concerned must be acquiring assets in excess of its new borrowing.

These relationships can be summarised as follows:

INCOME (after interest and tax payments) – CONSUMPTION EXPENDITURE = SAVING = ACQUISITION OF ASSETS – INCREASE IN LIABILITIES

An important question is whether income, and therefore saving, should be defined to include capital gains, whether realised or not. The definitions commonly used, arising from the identification of income with "production," exclude them; but capital gains and losses may have a marked effect on saving as usually measured.

A related question is whether financial asset and liability values should be reduced by the rate of inflation in each period. In this case, income and saving would be defined as occurring after the provision for maintaining intact the real value of net financial assets. Again, this is not common usage. But the desire to rebuild the real value of financial assets helps explain the high level of nominal personal saving when inflation unexpectedly rises sharply, as it did in the 1970s.

Finally, it is usual in national accounts to express the difference between a sector's saving and the value of its physical investment as its "financial balance." If a sector has an excess of saving over investment, it has a "financial surplus" and must have acquired net financial claims on other sectors. If its investment exceeds its saving, it has a "financial deficit," which it must have met by running down its financial assets or by net borrowing from other sectors, or both.

Chapter II

What Determines Saving?

There have been many explanations of personal spending and saving behaviour. Some have emphasised the role of habit; others have stressed more or less irrational compulsions, like the worship of wealth for its own sake or the desire to keep up with the Joneses. Such explanations, however valid, throw little light on changes in saving levels or on international differences in saving.

In countries suffering from the "suppressed" inflation typical of the communist world or in those engaged in a prolonged and major war, saving may be "involuntary," the reflection of shortages when prices are held below market-clearing levels. Such situations are excluded from this discussion.

TIME PREFERENCE

Economic analysis interprets saving as depending primarily on a willingness to give up the normal preference for consumption today to increase income and consumption tomorrow. The rate of "time preference" may partly reflect the habits and inclinations we call culture, but it is also strongly affected by the relative strength of possible future consumption needs, which change over time and vary among countries.

These needs can include, in the broadest sense, the desire to protect against general contingencies and, more specifically, against a possible drop in income resulting from retirement, illness or unemployment. Thus, demographic factors, the stability of employment income and the breadth of social security systems may be important determinants of personal saving and may be especially helpful in explaining international differences in saving.

THE ROLE OF WEALTH

It should be noted that there are two different perspectives on time preference in general and on the role of wealth in particular. One emphasises directly the question of present versus future consumption and regards the change in wealth primarily as the outcome of the choice of the saving level. The other perspective sees a particular level of real wealth as the direct target, of which the current level of

saving is treated only as the outcome. The wealth approach also leaves more room for motives for accumulating wealth besides future consumption needs.

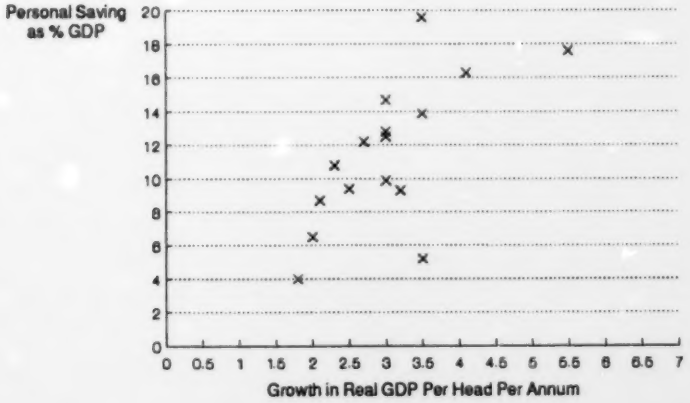
The two approaches lead to different frameworks for analysing saving behaviour, especially over the long term. For example, the first stresses demographic and similar factors, particularly in the so-called life cycle and permanent income frameworks, which say basically that saving behaviour reflects the desire for a consumption stream over our lifetime that is less variable than earnings (see Ando and Modigliani, 1983). The permanent income approach is in the same spirit but also allows for the desire to leave legacies on death, defining permanent consumption as the maximum level that can be maintained indefinitely. This implies that permanent consumption allows maintenance of the initial level of wealth, which includes the present value of expected "labour" income. In the pure life cycle approach, on the other hand, consumption is managed so as to exhaust wealth by the expected date of death (or that of the surviving spouse, if any).

In addition to underlying factors like the age structure of the population, saving ratios in the life cycle/permanent income framework will also depend on whether changes in real incomes are expected to be permanent or temporary. Corporate dividend policies may fit into a similar, if not identical, smoothing pattern.

The wealth-target approach instead emphasises the implications of having a particular desired ratio of wealth to income, for whatever reason. A target ratio of wealth to income will imply a particular ratio of saving to income, especially over the long term. For example, if desired personal wealth is four times personal income per head and the latter is growing at 3 percent per annum, the personal saving ratio must be 12 percent if the desired ratio of wealth to income is to be maintained (saving 12 percent of income adds 3 percent to the stock of wealth if the latter is four times income).

This may help explain the high saving rates of high growth countries like Japan, South Korea and Taiwan. Saving ratios reflect relative growth rates rather than relative real national income levels. Of course, it is equally true that high saving and investment can promote growth, so the relationship is not in one direction; and low growth countries may be caught in a correspondingly vicious cycle. It must be stressed, however, that the life cycle approach, too, implies that saving will depend on growth, in that if each new generation has a higher income than the old, the saving of the new will more than offset any dissaving by the old. Figure 1 supports the proposition that saving rates are influenced by growth rates, although because other factors also influence saving, the connection is not very close.

Figure 1 GROWTH AND PERSONAL SAVING IN 16 COUNTRIES, 1960–87



	Personal Saving as % GDP	Growth in Real GDP Per Head Per Annum		Personal Saving as % GDP	Growth in Real GDP Per Head Per Annum
US	8.7	2.1	Australia	10.8	2.3
Canada	9.9	3.0	Austria	9.3	3.2
Japan	17.6	5.5	Belgium	14.7	3.0
Germany	12.2	2.7	Finland	5.2	3.5
France	12.8	3.0	Greece	16.3	4.1
Italy	19.6	3.5	Netherlands	13.9	3.5
UK	6.5	2.0	Spain	9.4	2.5
			Sweden	4.0	1.8
			Switzerland	12.5	3.0

Source: OECD National Accounts.

In the short term, however, the wealth approach emphasises more directly the effect on saving of unexpected changes in the real value of wealth because of inflation shocks, which reduce the real value of many financial assets and may stimulate saving to repair the damage, as happened in the 1970s. Capital gains must also receive attention. A boom in share or house prices will tend to reduce saving ratios as conventionally measured if wealth effects are important. It also follows that, in judging the financial condition of any sector or of the country as a whole, any change in the value of its assets should be taken into account. Low saving as usually measured, or a balance of payments deficit, is certainly of less concern if the real value of (net) assets held is rising.

The life cycle consumption approach has the advantage of coming within the framework of the standard economic analysis of utility

maximisation. The target-wealth approach explains how saving might react to changes in real incomes or real asset values but leaves open the question of what determines the target itself. Insofar as target-wealth ratios reflect demographic and related factors stressed in the income framework, a link exists between the two approaches. The target-wealth approach more readily encompasses the mixture of possible psychological forces influencing wealth accumulation, but these are not easily measured. Recourse may have to be made to either approach, or both, to explain saving behaviour at different times or between different countries. In general, however, the life cycle approach, if supplemented by the bequest motive and if adjusted for the uncertain date of death—both of which lead to more saving by the old than the pure life cycle approach predicts—has been a reasonably robust framework for explaining saving behaviour (Hurd, 1990, and Modigliani, 1986).

INTEREST RATES AND CREDIT RATIONING

Changes in real interest rates, after tax, affect saving through different, even divergent, routes. It is commonly assumed that individuals will save more of a given income if interest rates are high because they will obtain more consumption tomorrow by giving up consumption today. However, for those saving with a fixed future expenditure in mind, high interest rates will make this achievable with less saving. There seems to be some distinction in this respect between the young and the old. According to research, the old respond to a rise in interest rates by reducing saving. There may also be differences within countries in the motive for saving—for example, saving for specific contingencies such as marriage and the education of children is particularly important in Japan.

Nevertheless, for the private sector as a whole, it is probably correct to assume that a rise in real net interest rates will raise saving out of a given level of income. A rise in interest rates will reduce many asset values and redistribute income from borrowers to lenders, who tend to be relatively high savers. Recent empirical research supports the conventional view. One investigation concluded that the desired saving rate in 10 OECD countries in the period 1959–88 was raised by one-third of 1 percent for every 1 percent increase in the expected real interest rate (Barro and Martin, 1990).

The effect of expected inflation can also be included under the interest rate heading. If for some reason nominal interest rates do not rise fully in response to an increase in expected inflation, so that ex ante real interest rates fall, saving will tend to be reduced.

(Unexpected inflation, however, by unexpectedly reducing the real value of financial assets, will tend to raise saving ratios.)

Because consumption can be financed by borrowing, loan conditions other than interest rates will also influence saving, by affecting the ease of borrowing and the degree of credit rationing. Loan terms may include cash deposit requirements or a maximum ratio of loan to income or assets. The liberalisation and increasing competitiveness of financial markets over the past decade, therefore, has been one development tending to reduce saving ratios in many countries (but this has been partly offset by higher real interest rates that the liberalisation of financial markets may have necessitated). Differences in the degree of credit rationing may also help explain international contrasts in personal saving behaviour.

DOES INVESTMENT DRIVE SAVING, OR VICE VERSA?

An important question is how far an increase in profitable real investment opportunities generates the saving necessary to release the resources needed for investment, and vice versa. In a closed economy, as in the world as a whole, an actual change in investment in any period, in either direction, must be matched by an equal change in saving; both are the difference, by definition, between income (which is defined to equal output) and consumption. However, the underlying process resulting from an increase, say, in investment opportunities, may include unexpected inflation or a rise in real interest rates—either of which will ultimately affect saving—or simply the willingness of businesses to save more. In an open economy, an increase in investment may instead be financed partly through a balance of payments deficit and an inflow of capital, that is, by the saving of foreigners, to an extent that will depend partly on exchange controls and the fluidity of international capital.

Table 2 shows the relationship between investment and saving ratios, column $\beta(S/Y)$, in different countries. The figure of 0.58 for 1983–87 means that a 1 percent difference among investment ratios has tended to be associated with a 0.58 percent difference among saving ratios. The R^2 column shows what proportion of the variation in investment ratios among countries can be explained by the equation as a whole. It is some measure of the extent to which investment and saving are correlated at all.

The connection between investment and saving ratios in individual countries has fallen, which is not surprising in view of the greater mobility of international capital that has been produced by financial liberalisation in the 1980s. Nevertheless, the correlation remains

Table 2 THE RELATION BETWEEN GROSS NATIONAL INVESTMENT AND SAVING RATIOS*

	Constant Term	β(S/Y)	R^2
1963-67	0.033	0.91	0.90
1968-72	0.053	0.80	0.82
1973-77	0.077	0.77	0.44
1978-82	0.085	0.71	0.47
1983-87	0.094	0.58	0.61

* Pooled data for 23 OECD countries. The regression is $I_i/Y_i = \alpha + \beta(S_i/Y_i)$, where I_i, S_i and Y_i are domestic investment, domestic saving and income in country i.

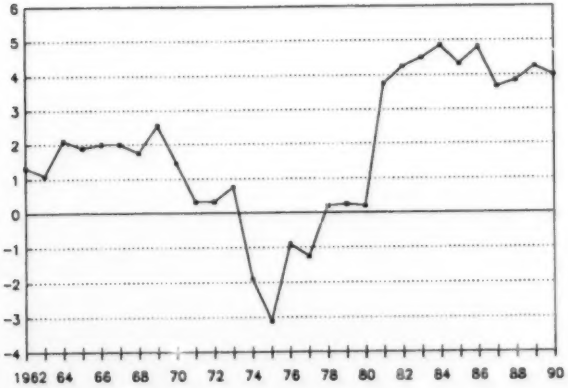
Source: "Saving Trends and Behaviour in OECD Countries," OECD, 1990.

fairly high. Moreover, the larger the number of countries studied—thus approaching the closed economy of the world as a whole—the larger the number of countries likely to be found in which investment and saving have moved together, as increased investment will have been matched by increased saving somewhere.

The explanation of observed changes in saving ratios, therefore, may lie at least partly in changes in profitable investment opportunities rather than in a change in underlying "thriftiness," which can be defined as the willingness to save out of a given real income at a given real interest rate. One test of the difference is the behaviour of real interest rates themselves.

If there is a fall in saving and investment ratios and a rise in real interest rates, as occurred in the first half of the 1980s (see Figure 2, p. 10), it can be inferred that the stimulus has come mainly from the side of lower saving, because a fall in investment tends to reduce real interest rates. On the other hand, if investment and saving ratios rise and real interest rates also increase, as happened in the second half of the decade, it can be concluded that the stimulus has come mainly from the investment side, because increased thriftiness, with unchanged investment demands, tends to reduce interest rates.

Figure 2 REAL 3-MONTHS' RATES OF INTEREST, WEIGHTED AVERAGE OF G-7 COUNTRIES



Source: Barclays Bank Economics Department.

Chapter III

Why Is Saving Important for Policy?

SAVING AND DEMAND

Saving, as the obverse of spending on consumption, is one factor influencing the level of aggregate domestic expenditure or demand, which in turn is a determinant of the level of inflation and, in the short run, of output and employment.

In the 1960s, some countries pursued a policy of active short-term demand management with the aim of achieving full employment at a tolerable rate of inflation. Monetary policy outside the United States was constrained by the fixed exchange rate system (to an extent depending partly on the effect of exchange controls) so that demand management relied heavily on fiscal policy. This approach employed target levels of government saving to offset swings in private saving, sometimes supplemented by credit controls.

This policy was more common in Britain, Italy and Scandinavia than elsewhere; the political mechanism of the United States does not readily lend itself to using fiscal policy in this manner.

In the 1970s, previously activist governments turned away from short-term demand management in general and attempts to control specific sectors of demand in particular. They began to see inflation as primarily a money supply phenomenon in which the level of real output and employment, except over the very short run, was determined by real or supply factors. The advent of flexible exchange rates outside the European Monetary System (EMS) made possible more independent monetarist—that is, money-supply-target—policies.

Moreover, many economists developed the view that the effects of short-term demand management on output would prove to be largely random and perhaps even harmful because of the difficulty of forecasting the effects of policies which the private sector would try to anticipate and because of the frequent predominance of short-term political ends in economic policymaking. Other economists, in a minority view, went so far as to argue that policy changes in government saving would be completely offset by opposite swings in private saving—for example, as people realised that they needed to spend less today because of the likelihood that an increase in the budget deficit would eventually have to be reversed through higher taxes.

A representative view today is that the assumption of a full 1-for-1 offset of changes in government saving is implausible in the light of uncertainty and the possibility that people may not place such considerable importance on the situation of their heirs. However, a high degree of offset seems to exist in countries, like Italy and Belgium, where the level of government debt in relation to national income is so high that the people are fully aware that an increase in the budget deficit will prove unsustainable. More generally, a major and lasting change in the level or structure of social security benefits will probably cause some offsetting change in private saving behaviour by altering the assessment of future private needs.

In recent years, some countries have partly reverted to a short-term policy focus. Britain's medium-term anti-inflation strategy, for example, has proved difficult to implement. Financial deregulation has disrupted previous relationships between the stock of money, however defined, and the flow of spending. Some countries have developed an eclectic approach in which fiscal policy supplements monetary policy, which, however, still predominates.

Nevertheless, unless the world experiences a prolonged recession, which seems unlikely, there is little chance that there will be any return to continuous output-directed fiscal policies. In most countries, the focus of policy remains the monetary control of inflation, but with more judgement from year to year. Government saving targets still play only a minor role in short-term stabilisation policies, and private saving tends to be monitored as part of economic diagnosis rather than of prescription. When fiscal policy has aimed at influencing private saving for demand-control purposes, it has usually been temporary, half-hearted or lacking in coherence. In Britain, both the Conservative government and the Labour opposition have expressed reluctance to use changes in tax rates specifically for short-term demand management.

SAVING AND GROWTH

In the short run, an increase in the desire to save, by depressing demand, will probably reduce the level of output, once unwanted inventories cease to be accumulated. In the long run, the common assumption, at least for a closed economy, is that an increase in the willingness to save, certainly by the private sector, will lead to a fall in real interest rates and therefore to an increase in investment and the country's potential rate of growth.

In an open economy in a world with high international capital mobility, the relationship is more complex. A country's real interest

rate will be at least partly influenced by international interest rates, unless that country is big enough to affect world rates, as is perhaps the United States. However, because exchange rates tend not to reflect relative purchasing power parity even in the medium term, real interest rates measured in domestic currencies need not be the same in different countries, even with high capital mobility. But the fact that real interest rates in an open economy depend even partly on the world level puts some limit on the extent to which an increase in saving can reduce a country's real rate of interest.

The domestic investment response to higher saving, therefore, will to that extent be muted; higher saving will be reflected partly in a capital outflow and an improvement in a country's current account balance of payments. That is, an increase in saving will lead partly to an accumulation of overseas assets, real or financial, as well as to a rise in domestic real assets. Growth of total income, or gross national product, will then exceed growth of gross domestic product.

Having said this, it remains likely that high saving, at least in all but very small economies, will tend to produce relatively low real interest rates and, therefore, relatively high investment and output growth. Japan's high saving, for example, has probably helped in this way: during most of the 1980s, particularly after the rise in the U.S. budget deficit in 1982–83, real interest rates in Japan tended to be lower than those in Britain and the United States. The reversal of this difference in 1990 is due to the temporary divergence of economic conditions.

Table 3 REAL 3-MONTHS' INTEREST RATES*

	US	UK	Japan
1980	−0.38	−1.14	2.96
1981	5.00	1.82	2.37
1982	5.77	3.42	4.10
1983	5.73	5.28	4.42
1984	5.75	4.78	3.72
1985	4.32	5.81	4.34
1986	4.52	7.27	4.17
1987	3.08	5.33	3.43
1988	3.53	5.14	2.96
1989	4.09	5.66	2.55
1990	2.80	4.96	4.03

* Three-month Eurorates deflated by change in Consumer Price Index.

SAVING AND THE BALANCE OF PAYMENTS

A topical issue is whether governments should focus policy directly on the balance of payments on current account—the difference between exports and imports of all goods and services, including "invisibles." In practice, as surplus countries usually have more room to manoeuvre, the question is whether deficit countries, notably the United States and Britain, should aim specifically to reduce their balance of payments deficits, and if so, how.

This question involves the level of saving because, aside from measurement errors, the balance of payments on current account must be equal to the difference between a country's saving and its domestic capital investment, including inventory investment. A current account deficit must imply an excess of total domestic investment over total saving, and a surplus involves the converse. This follows from the definitions conventionally employed to describe a country's economic activity, including expenditures by foreigners (exports). Thus:

TOTAL EXPENDITURE	= Consumption + Investment + Exports
TOTAL OUTPUT	= Total Expenditure – Imports
	= Consumption + Investment + Exports – Imports
TOTAL INCOME	= Consumption + Saving
SAVING	= Income – Consumption
	= Total Output – Consumption
	= Investment + (Exports – Imports)
EXPORTS – IMPORTS	= Saving – Investment
IMPORTS – EXPORTS	= Investment – Saving

Saving and investment can also be split into that of the government, corporate and personal sectors. A country's balance of payments must thus be equal to the sum of its sector deficits and surpluses (apart from measurement errors). A balance of payments deficit therefore implies that at least one sector is in financial deficit.

For a balance of payments deficit to be reduced, it is necessary either to increase total saving or to reduce domestic investment, or both. A fall in the exchange rate, however necessary, is not sufficient even though it improves competitiveness. Any effect on the balance of payments must require a change in the balance between saving and domestic investment in at least one of the sectors. The counterpart, for example, might be the extra corporate saving produced by higher profits, or the higher personal saving resulting from unexpectedly high inflation. In a fully employed economy, fiscal policy must be tightened to enable a fall in the exchange rate to improve the current account without a rise in inflation.

Can a Balance of Payments Deficit Be Sustained?

The importance assigned to the balance of payments has changed according to historical circumstances. The mercantilist idea that a surplus is desirable because it leads to the accumulation of gold necessary to pay armies has long since been abandoned, and the avoidance of a depression has made irrelevant the use of a surplus to reduce unemployment (at the expense, it must be stressed, of other countries).

The heart of the question today is whether, and under what conditions, a country can run a large payments deficit without provoking the collapse of its exchange rate, which would aggravate the problem of inflation. Of course, if the payments deficit results from a level of inflation higher than that of the rest of the world, the problem is the simpler one of anti-inflationary policy in general: there is no independent balance of payments question as such. The question arises only if a deficit exists despite the absence of a relatively high rate of inflation.

Because of international capital flows, a country's growth rate need not be limited by any balance of payments constraint. History shows that when a country free from political risk uses its net foreign borrowing—the counterpart of its deficit on current account—to create real assets with a return in excess of the cost of foreign capital, it can run a deficit for a lengthy period. Countries with a high rate of return on capital relative to the cost of foreign borrowing can be persistent large net importers of capital, as were the United States, Canada and Australia before 1900. It follows, of course, that some countries will be in persistent surplus. Although attention today is focused on Japan and Germany, Switzerland and the Netherlands have also tended to be habitual net exporters of capital.

It must also be said that simply because a country has a relatively high rate of return on capital does not necessarily mean that it will be a net importer of foreign capital, as the record of Japan, with its high investment but still higher saving, shows. Today's controversies focus on differences in saving rates more than on differences in investment rates perhaps because the former have become more diverse (see Table 4, p. 16).

International differences in the desire to save and in the level of investment opportunities are inevitable, and therefore so are current account "imbalances." A balance of payments deficit can be a true constraint on growth, as distinct from being merely a symptom of excess demand, only in special circumstances in which growth is dependent on the supply of imported capital goods or materials that

Table 4 THE DISPERSION OF SAVING AND INVESTMENT RATES

	22 Countries—Standard Deviation Across Countries of:	
	Investment Ratios	Saving Ratios
1960–70	3.76	3.87
1971–80	3.84	3.59
1981–87	3.84	4.35

Source: OECD National Accounts.

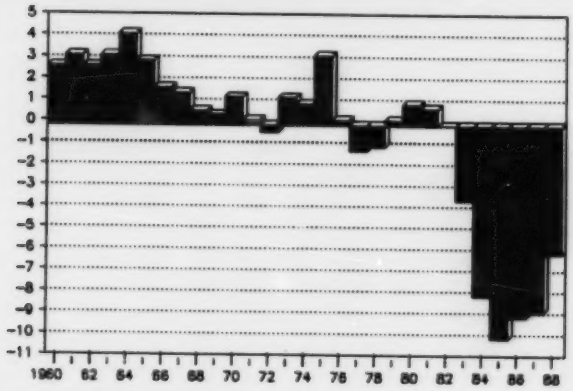
cannot be financed. Because domestic investment should attract foreign capital if the expected rate of return is adequate, the inadequacy of finance must hinge on the special proposition that, although private rates of return on capital may be low, externalities in the return from investment make the social rate of return high. A large balance of payments deficit may also seem to be a constraint on growth when a country has to make difficult and painful adjustments when its staple export industries are in decline, as was the case in Britain after 1918. But this problem is more properly regarded as structural rather than caused by the balance of payments deficit.

The problem of a balance of payments deficit experienced in a non-inflationary situation is financial, amounting to asking how long a country can run a deficit without provoking a collapse of the exchange rate that will seriously disrupt anti-inflationary policy. In turn, this amounts to asking whether financial markets other than the foreign exchange market will adjust to the pressure of demand for overseas funds in a way that, through interest rate relativities for example, is both effective and tolerable. In the case of a large country like the United States, the size of its current account deficit relative to the flow of saving of the rest of the world will be one factor determining whether a deficit is easily sustainable at tolerable interest rate differentials. The U.S. ability to run a deficit has been helped not only by the liberalisation of international financial markets and the role of the dollar as a reserve currency, but also by the fact that the U.S. deficit has been falling as a proportion of world saving (see Figure 3, p. 17).

PRIVATE VERSUS GOVERNMENT SECTOR DEFICITS

On the other hand, a large payments deficit of which the counterpart is low government saving and a large budget deficit is probably less sustainable because it is potentially more damaging to the

Figure 3 U.S. CURRENT ACCOUNT BALANCE AS A PERCENTAGE OF SAVING IN OTHER OECD COUNTRIES



Source: OECD National Accounts.

exchange rate than is a payments deficit produced by low private sector saving. Financial markets may come to fear that the government concerned will eventually react to its mounting interest bill by resorting to the printing press and high inflation as the easiest way of transferring wealth from private sector and foreign creditors to itself. This possibility explains the fear of some economists that a continued large U.S. payments deficit will eventually cause overseas holders of dollars to take flight if their claims on the United States accumulate.

Perhaps the most critical factor is whether a country has become a net foreign debtor and the ratio of its net debt to GNP or exports is rising. A country with net foreign debt and a continuing payments deficit is at risk from high real world interest rates. If the average interest rate on its liabilities exceeds its growth rate, the ratio of that country's liabilities to GNP will increase, putting it still more at risk—the so-called debt trap. The United States had an excess of foreign liabilities over foreign assets in book value terms of more than $600 billion at the end of 1989, or 12 percent of GNP, but in current value terms it may still be in surplus. The United States certainly has an excess of total foreign interest receipts over total interest payments. Nevertheless, the United States probably now has an excess of short-term liabilities over short-term assets, on which interest payments react quickly to changes in world interest rates.

A payments deficit arising from low private sector saving should be more easily sustainable, assuming that it is not merely a reflection of relatively high inflation. The private sector can usually—although not always—be expected to make a realistic assessment of its ability to service debt, which foreign exchange markets should recognize. Alternatively, if overseas lenders are sceptical of private sector creditworthiness, the resulting stiffening of lending terms will bring about a restriction of borrowing. Experience suggests that it is the corporate rather than the household sector that periodically has seriously over-borrowed, and the margin between corporate and government bond yields is certainly variable, as the 1989–90 rise in corporate bond yields in the United States showed. Share prices, of course, also react to mounting financial strain.

It cannot always be taken for granted, however, that such reactions in financial markets will necessarily affect domestic saving or investment quickly enough to prevent an undesirable fall in the exchange rate. On simple portfolio diversification grounds, there must be some limit to how much investors in surplus countries are willing to pile up claims even on private sector debtors in response to an increase in the yields they offer, even if a country is not in a debt trap. Indeed, economists sometimes divide capital flows into those that are sustainable and those that are not. But this offers little guidance as to how large sustainable flows might be in specific cases.

Private sector borrowers, both personal and corporate, do sometimes make over-optimistic assumptions about general economic conditions, over-estimating future income or under-estimating future interest costs, or both. If borrowers then sharply reduce expenditure, the effect on the economy might be unnecessarily deflationary. Alternatively, the fear of bankrupting borrowers or of endangering the solvency of banks might inhibit the monetary authorities from carrying out a restrictive monetary policy to bring down inflation. Unrealistic borrowing levels are not merely a matter of private concern, as the situation in both the United Kingdom and the United States confirms.

WHY NOT RESTRICT CREDIT?

For all the reasons just discussed—controlling inflation, influencing the balance of payments and preventing rash borrowing—calls for credit restriction have become more frequent in Britain (but not so much in the United States, even though American debt problems are more acute).

Apart from the questions of freedom of choice and of whether a balance of payments deficit really constitutes a separate problem, credit restriction is less effective than its advocates claim. The widespread abolition of exchange control has facilitated foreign borrowing, and not just by businesses. The development of markets in instruments like options, which enable borrowing to be replicated, has also weakened the effectiveness of credit restriction, at least as far as professionals are concerned. To offset leakages, the degree of restriction on more captive borrowers, which in practice means the relatively poor, would have to be more drastic than in the days before free capital movements and financial innovation. Those who receive credit at below market-clearing rates of interest are in effect being subsidised at the expense of frustrated would-be borrowers.

Some forms of credit restriction have a partly temporary effect, while would-be borrowers save required cash down payments, for example. Credit restriction may sometimes be needed as an emergency measure, but the experience of the United Kingdom in the 1950s and 1960s demonstrates that changes in credit restriction for short-term stabilisation purposes have a disproportionate effect on particular industries, sometimes with perverse timing. To be appropriate at all, moreover, credit restriction may have to be aimed not so much at consumer credit as at the politically much more sensitive area of home mortgages. This has been particularly true of Britain, as is shown in Chapter IV.

Rather than recourse to credit rationing, taxation is the most fruitful source of a remedy. It is surely no accident that taxation plays a part in stimulating periodic over-borrowing in both the corporate and the personal sectors. In the former, because interest ranks as an expence for corporate tax purposes, debt financing is subsidised if the effective rate of corporation tax exceeds the tax rate of lenders, which has certainly been the case in the United States since 1986. In the personal sector, it is in mortgages, where tax subsidies are widespread, that over-borrowing is usually concentrated, in the United States as well as in Britain.

Chapter IV

Changes in Saving Patterns

A CYCLICAL REMINDER

It is necessary first to distinguish medium- and long-term trends from short-term changes in saving ratios in which cyclical factors may predominate. Government saving, relative to GNP, tends to rise in a boom, when tax receipts from a progressive tax system are buoyant, and fall in a recession. Private saving tends to move in the opposite way (it must do in a closed economy).

Within the private sector, corporate saving as a proportion of corporate income after tax tends to rise in a boom because dividends tend to lag behind profit growth, at least until the boom's final stage. Whether corporate saving rises as a percentage of GNP in a boom, however, may depend on the corporate tax bill. The personal saving ratio may or may not fall in a boom. If real income growth is faster than its future expected rate, the saving ratio may rise. On the other hand, the rise in house and equity prices and the strengthening of confidence may, as in Britain until 1989, outweigh this factor.

Thus there should be no rush to draw long-term inferences from short-term changes. For example, in the United States, company profitability has come under pressure since 1988 as the economy has weakened, reducing the corporate saving ratio; in the United Kingdom, personal saving has been rising from an abnormally low level in response to high interest rates and falling house prices. Recession in the United States and the United Kingdom is also causing their balance of payments deficits to fall, the counterpart mainly of higher personal saving. This discussion is concerned with longer term perspectives.

SAVING TRENDS IN SECTORS OF THE ECONOMY

Private Saving

Even though people do not completely "pierce the corporate veil" and treat business saving as fully equivalent to income from dividends when deciding on their own saving, there undoubtedly has been a tendency for personal and corporate saving to move in opposite directions. Total private saving rates in many countries have therefore been relatively stable. In any case, in developed capital markets,

which sectors do the saving needed to finance investment does not matter much (except that in some situations there may be adverse side effects, such as disincentive effects if high tax rates are used to raise government saving). A quick look at the sector composition of saving provides the broad perspective needed to head off undue preoccupation with the saving of any particular sector, especially personal saving, which has received unwarranted attention.

Total saving rates of most OECD countries in the 1980s were well below the levels of the 1970s and, in most cases, of the 1960s, as Table 1, p. 2, shows. It is important to note that private saving did not fall as much except in Japan, where the rate fell from a very high level. The main reason for the drop in saving rates in the 1980s—the exception being the rather special case of the United Kingdom in recent years—was the fall in government saving.

Government Saving

In most industrial countries, government saving as a percentage of GNP fell in the 1970s, partly because inflation raised government interest costs and partly because some countries tried to use fiscal policy to mitigate recession. Government saving again fell in most countries in the 1980s. In some, including the United States and Canada, and in the United Kingdom until 1986, government saving was actually negative, that is, government current receipts did not cover government current expenditure. Indeed, the fall in government saving more than accounted for the drop in total saving in these three countries.

Among the major countries, only in Japan did government saving rise substantially in the 1980s, outweighing the fall in Japan's private saving rate. The United Kingdom returned to positive government saving in 1986, but at a lower level than in the 1970s and at a much lower level than in the 1960s. The emergence of a public sector surplus in the United Kingdom was mainly the reflection of the fall over the years—including under a Labour administration—in government capital spending as a percentage of GNP. Indeed, the investment ratio of the government sector has fallen in most countries since the 1960s, primarily in an attempt to reduce budget deficits in the face of a rising interest bill.

Corporate Saving

As already mentioned, private saving held up relatively well in the 1980s. Corporate saving rose in most industrial countries except

Japan, especially during the latter part of the 1980s, regaining the levels of the 1960s in many cases. A true comparison with the 1970s, however, is distorted by the high inventory appreciation of that period, which inflated profits on a historical cost basis. Adjusting for this would reduce corporate saving in the United Kingdom especially in the 1970s. According to Bank of England estimates, the real pre-tax rate of return on capital employed of non-North Sea oil companies fell from an average of nearly 10 percent in 1970–73 to 4 percent in 1975 and to 2 percent in 1980 before recovering to 11 percent in 1988.

Corporate saving tends to follow corporate profitability. In recent years, anti-inflationary policies have been reducing corporate profitability in some countries, beginning with the United States. Nevertheless, rates of return on capital employed appear to be remaining above the levels of the mid-1970s and early 1980s, when sharp increases in real oil prices combined with real wage resistance to bite deeply into corporate profitability in many countries.

Industrial profitability in many countries in the 1990s may not be much less than it was in the 1960s, when the world financial system was relatively stable and Europe and Japan were enjoying the investment opportunities presented by the process of catching up with U.S. technology and products. In the 1990s, the widening liberalisation of trade and finance, especially in Europe, and the collapse of communism in Eastern Europe will open up another new era of investment growth and high demand for capital.

Personal Saving

In light of the relative stability of total private sector saving, the recent concentration of popular discussion on the fall in personal saving rates of the United States and the United Kingdom in the 1980s is unjustified. Furthermore, most other countries, with the notable exception of Canada, also experienced declines to some extent. Although the balance of factors has no doubt varied from country to country, one aspect has been common to all: measured personal saving rates rose in the 1970s in all developed countries examined by the OECD.

The reasons for this are not hard to find—they originated in the tripling of oil prices in 1973. Part of the rise in personal saving, as conventionally measured, represented the increased inflation element in interest income, which really constituted an allowance for the maintenance in real terms of principal. Adjusting for this would reduce estimates of both personal income and saving in the 1970s (and would increase estimates of government saving). But there was

also a true rise in personal saving rates. The unexpectedly sharp increase in inflation reduced the real value of financial asset holdings in many countries and must also have made consumers more cautious because of the deterioration in employment prospects.

To some extent, therefore, the subsequent fall in personal saving rates in the 1980s—again with the major exception of the United Kingdom in recent years—can be regarded as a return to more normal conditions. Demographic factors have also played a part in the United States and the United Kingdom, where the later 1970s and the first half of the 1980s saw an unusually rapid rate of growth of new households, the stage at which borrowing is relatively high. This phase is now passing, but the increase in the proportion of old people will tend to hold saving rates below what they would otherwise be.

Nevertheless, economic conditions in some countries would be more satisfactory if personal saving were higher. In the United Kingdom more than elsewhere, inflation has again become a serious problem, and the fall in personal saving was undoubtedly one cause of the pressure of excess demand. Even in the United States, 5 percent inflation is uncomfortably high for an economy in recession. The U.S. balance of payments deficit, though falling, also remains a potential source of concern.

Personal Saving in the United Kingdom

If the form of measurement commonly used in the United Kingdom is applied, the ratio of personal saving to personal income after tax fell from the abnormally high figure of 13.1 percent in 1980 to 8 percent in 1986 and to only 5 percent in 1988, the lowest figure since the 1950s; that for 1989 was still only 6.5 percent. Using the OECD definition, the fall was less dramatic but still large.

This drop in Britain's personal saving ratio is attributable to several factors, among them the expectation—now seen to have been unjustified—that the strong improvement in real incomes and employment conditions in the mid-1980s would continue. The fall has also been one of the effects of financial deregulation, which began with the removal of exchange controls in October 1979 and the effective liberalisation of bank lending in June 1980. The latter made all personal borrowing easier and indirectly added to the rise in house prices that would have resulted in any case from the fall in interest rates and strong real income growth. Because houses dominate personal sector wealth in Britain, which has more than 60 percent home ownership, the rise in house prices made most consumers feel much wealthier and more ready to borrow.

Net mortgage borrowing has substantially exceeded the addition to the private sector housing stock in Britain. This excess, the so-called equity withdrawal, contributed to the consumption boom, in addition to helping to finance an increase in personal holdings of various financial assets; for the ratio of financial assets to income, as well as the debt ratio, increased.

It should be stressed that other elements in Britain's personal credit boom pale into relative insignificance, despite popular misconceptions to the contrary. More than 40 percent of all bank credit card borrowing, for example, is repaid within the interest-free period, and the net increase in card credit outstanding has been very small. Even the rise in other forms of consumer borrowing has been a fraction of the increase in mortgage borrowing, as Table 5 shows. Equity withdrawal has represented more than half of the net increase in mortgages since 1984.

House prices and mortgage borrowing will not stimulate consumer spending much over the next few years. In the long run, maintaining a quieter housing market might require withdrawing tax subsidies to home ownership, mainly by taxing the imputed rent and capital gains from home ownership. This is not on the political agenda, however. The alternative of credit control has been advocated in principle by the Labour Party, but without much indication of how it might be applied in practice to this politically sensitive area.

Table 5 NET PERSONAL BORROWING IN THE UK, 1985–89 (Bill. £)

	1985	1986	1987	1988	1989
House mortgages	19.0	27.0	29.3	40.3	33.8
Credit cards (banks)	0.8	1.1	0.8	0.7	0.5
Other consumer credit	3.0	3.2	5.1	5.4	5.2

Source: *Financial Statistics*, HMSO, 1990.

Personal Saving in the United States

Using the conventional form of measurement, U.S. personal saving, as a percentage of personal income after tax, fell from 7.5 percent in 1981 to only 3 percent in 1987, with a recovery to 5.5 percent in 1989. The OECD, however, defines U.S. personal income and saving more comprehensively; it includes, for example, govern-

ment contributions to pension schemes on behalf of its employees, where these are known (for instance, in state and local governments). This puts them on the same basis as the increase in private pension funds, which are conventionally included in personal saving.

According to the OECD, therefore, personal saving in the United States rose in the 1970s, as it did in other countries and for similar reasons. But the average level since the 1960s has been higher, and the fall in the 1980s was smaller than that implied by conventional figures. Indeed, by 1989, U.S. personal saving on the OECD basis had regained the levels of the 1960s, although not quite those of the 1970s. Thus, in this respect, the concentration of popular discussion on the low rate of U.S. personal saving is unjustified.

Chapter V

The Changing Balance of Payments Pattern

International differences in saving levels are commonly discussed in the context of balance of payments, even though the mobility of capital makes imbalances easier to sustain. Table 6 shows the pattern of current account balances for the main industrial countries.

Differences in current account balance of payments positions were relatively small in the 1960s but widened in the 1970s, when the jump in oil prices had considerably differing repercussions. In most developed countries, however, saving-investment gaps were reduced fairly quickly. In the 1980s, real oil prices fell, but new and large persistent differences appeared, with the United States in deficit from 1982, the United Kingdom in an even relatively larger deficit, and Japan and Germany in large surplus. The persistence of these imbalances has almost certainly been facilitated by the liberalisation of financial markets.

Even though the U.S. deficit and the Japanese surplus have fallen relative to GNP, the contrast continues to cause tension and anxiety, if less than in the past. Proportionately, Germany's surplus is more than twice Japan's, but because it is mainly with the European Community (EC), and because German exports are dispersed over a wider range of products, the contrast causes less tension than does the balance between Japan and the United States.

The explanation usually offered for the large U.S. balance of payments deficit after 1982 is the persistence of the government

Table 6 OECD CURRENT ACCOUNT BALANCES AS A PERCENTAGE OF GNP

	1981	1982	1986	1987	1988	1989
US	0.2	-0.2	-3.4	-3.6	-2.6	-2.1
Canada	-1.7	0.8	-2.0	-1.7	-1.7	-2.6
UK	2.7	1.7	0.0	-1.0	-3.2	-3.7
Japan	0.4	0.6	4.4	3.6	2.8	2.0
Germany	-0.5	0.8	4.4	4.1	4.2	4.6
France	-0.8	-2.2	0.3	-0.5	-0.4	-0.4
Italy	-2.2	-1.5	0.4	-0.2	-0.7	-1.2

Source: *OECD Economic Outlook*, December 1990.

Table 7 SECTOR FINANCIAL BALANCES* AS A PERCENTAGE OF GNP IN MAJOR OECD COUNTRIES

	1981	1982	1986	1987	1988	1989
US						
Current Account	0.3	−0.2	−3.4	−3.5	−2.6	−2.1
Government Sector	−1.0	−3.5	−3.4	−2.4	−2.0	−1.7
Private Sector	1.3	3.3	0.0	−1.1	−0.6	−0.4
CANADA						
Current Account	−1.7	0.8	−0.4	−2.1	−1.7	−2.6
Government Sector	−1.5	−5.9	−5.5	−4.0	−2.9	−3.4
Private Sector	−0.2	6.7	5.1	1.9	1.2	0.8
JAPAN						
Current Account	0.4	0.6	4.4	3.6	2.8	2.0
Government Sector	−3.8	−3.6	−0.9	0.7	2.1	2.7
Private Sector	3.4	3.0	5.3	2.9	0.7	−0.7
GERMANY						
Current Account	−0.5	0.8	4.4	4.0	4.0	4.6
Government Sector	−3.7	−3.3	−1.3	−1.8	−2.1	0.2
Private Sector	2.2	4.1	5.7	5.8	6.1	4.4
UK						
Current Account	2.6	1.7	0.0	−0.9	−3.2	−3.7
Government Sector	−2.6	−2.5	−2.2	−1.3	1.0	0.9
Private Sector	5.2	4.2	2.2	0.4	−4.2	−4.6

* Private sector balances have been obtained as the difference between OECD estimates of the current account and government balances. Therefore, the statistical discrepancy frequently found in direct estimates of sector balances has been included in the private sector balance, whereas part probably belongs to the current account. The current account balance represents the balance of the overseas sector, with the sign reversed.

Source: *OECD Economic Outlook*, December 1990.

deficit. But as a proportion of GNP, the U.S. deficit peaked in 1983. The subsequent improvement, shown in Table 7, occurred because, if net interest payments are excluded, the so-called government primary balance went from a deficit of 1.8 percent of GNP in 1983 to a surplus of more than 1 percent in 1989. However, almost all OECD countries have government primary surpluses. Japan's primary surplus is about 3 percent of GNP; Germany's is about 2 percent; and the United Kingdom's is about 3 percent.

In contrast, the financial balance of the U.S. private sector moved from a surplus in the early 1980s to a deficit, at least until 1988. Changes in the U.S. balance of payments deficit therefore must be attributed to both sectors and not merely to the government, which attracts the most attention. But the government deficit is the greater source of potential strain insofar as the fall in the U.S. private sector

surplus reflects increased investment whereas the government deficit results from increased current spending relative to a mainly flat current revenue as a percentage of GNP.

Canada tends to run a persistent current account deficit, with a large if declining government deficit and a falling private sector surplus. Because it can tap U.S. capital flows by means of relatively small adjustments in interest rates, Canada's current account deficits are relatively easily financed.

The emergence of a large balance of payments deficit in the United Kingdom, at least until 1989, was due entirely to the swing from a large private sector surplus to an equally large deficit. Direct estimates of the private sector balance made in official U.K. national income accounts show a somewhat smaller deficit in recent years, but the trend is similar (see Table 8).

The fall in the U.K. private sector surplus and the emergence of a deficit resulted partly from the fall in the private sector saving ratio, but even more from the large increase in private sector investment after 1986. Parts of both the fall in private saving and the rise in investment were cyclical, so the U.K. balance of payments deficit has now decreased to only 1 percent of GNP. Most forecasts, however, envisage only a small further decline, mainly because government saving is falling and the government financial balance is moving into deficit again.

The emergence of a large payments surplus in Germany and Japan in the second half of the 1980s reflected in part a fall in their government deficits. But the German government sector is little more than in balance, whereas Japan's has moved into substantial surplus. Japan's balance of payments surplus relative to GNP has become smaller than Germany's. This is due to the disappearance of the previously large Japanese private sector surplus caused by the

Table 8 UK SECTOR FINANCIAL BALANCES AS A PERCENTAGE OF GNP

	1981	1982	1986	1987	1988	1989
Current Account[a]	2.6	1.6	—	−1.0	−3.2	−3.7
Government Sector	−2.6	−2.5	−2.3	−1.3	1.0	0.8
Private Sector[b]	4.3	3.7	2.3	0.1	−3.9	−4.6
Residual Error	−0.9	−0.4	—	−0.2	0.3	−0.1

(a) Also the balance of the overseas sector, but with the sign reversed.
(b) Including public corporations, as in the OECD statistics.

Source: *National Income and Expenditure*, HMSO, 1990.

substantial increase in investment, which has been running at twice the rate of growth of GNP since 1986.

SAVING OR INVESTMENT?

Although balance of payments differences must reflect differences in the relationship between the saving and investment of individual countries, it is worth referring again to the question of whether the changes in the pattern of payments deficits and surpluses arose more on the saving or on the investment side of the equation in the 1980s.

Figure 4, p. 30, suggests that during the first half of the 1980s, total investment rates fell by more than saving rates in Japan and Germany as compared with the 1960s and 1970s. In the United States and Canada, however, total saving rates fell more than the investment rate, which remained relatively steady in the United States. In most countries, the fall in saving was mainly in the government sector.

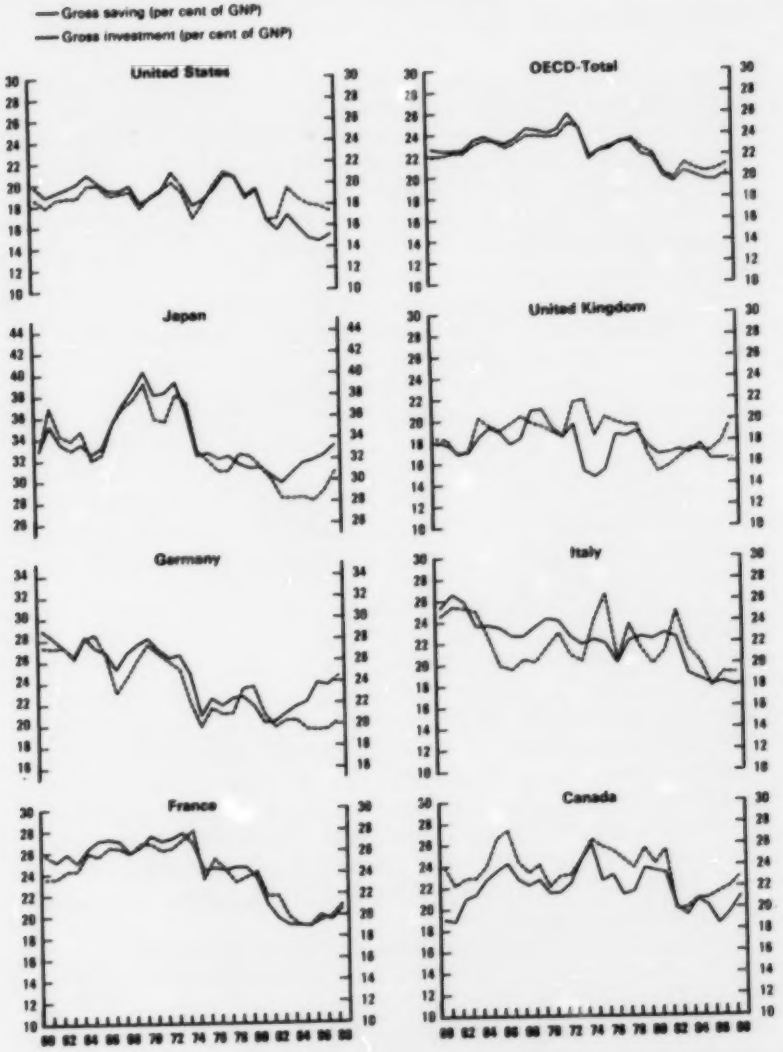
Therefore, the emerging pattern of payments imbalances in the years up to about 1986 reflected mainly a fall in the investment rates of Germany and Japan and a fall in the government saving rates of the United States, Canada and, to a lesser extent, the United Kingdom. U.S. government "dissaving" ceased to increase in 1988–89, but private saving fell from 1986 and private investment rose. This limited the reduction in the U.S. balance of payments deficit as the U.S. government deficit fell.

Similar changes have taken place in Canada. Its government deficit fell in the second half of the 1980s, at least until 1988, but its private sector surplus fell as investment recovered.

In the United Kingdom, the emergence of a payments deficit toward the end of the 1980s reflects a recovery in total investment. Table 1 (p. 2) shows that the total U.K. saving rate rose from 1986 to 1989. The increase in government saving more than compensated for the fall in private saving in this period. The emergence of a balance of payments deficit equal to 4 percent of GNP in 1989, as opposed to zero in 1986, implies that total investment increased from about 17.5 percent of GNP in 1986 to 22 percent in 1989. This increase occurred entirely in the private sector.

To the extent that the persistence of the U.S. balance of payments deficit toward the end of the 1980s and the emergence of one in the United Kingdom reflected a rise in private investment, there is less reason for concern. However, the economic situation in both countries would be much sounder if they had higher levels of saving—higher government saving in the United States and higher private saving in the United Kingdom.

FIGURE 4. TRENDS IN NATIONAL SAVING AND INVESTMENT RATES



Source: OECD *National Accounts* and "Saving Trends and Behaviour in OECD Countries." There are some small discrepancies with the figures shown in Table 1.

Chapter VI

Why Do Private Saving Ratios Differ?

There is no reason why saving ratios should be uniform or why international differences in saving behaviour should remain constant. As was shown in Table 4 (p. 16), saving rates became more varied in the 1980s compared with investment rates, the dispersion of which remained relatively constant.

CORPORATE SAVING

Differences in corporate saving rates are not as large as differences in personal saving and, to a small extent, can be explained by the spread of rates of return and corporate investment growth, with Japan and Germany usually at the top. In some cases, however, accounting and institutional differences distort comparisons. In Germany and Japan, for example, either company pension schemes are on a pay-as-you-go basis or employees' contributions are usually invested in company assets. In the United Kingdom and the United States, on the other hand, pension arrangements create funds which are invested in separate securities and are included in personal sector saving. An adjustment for this, which might transfer some 3 percent of GNP from corporate to personal saving rates in Germany and Japan, would only heighten the contrast between the personal saving rate, particularly between Japan, on the one hand, and the United States and the United Kingdom, on the other. But other possible adjustments, such as the one needed because Japanese company accounts do not fully consolidate earnings, as opposed to dividends, from extensive cross-holdings, would raise estimates of corporate profits and saving in Japan.

PERSONAL SAVING

Discussion of international differences in personal saving rates usually focuses on why Japanese personal saving is relatively high, especially in relation to the lower U.S. personal saving, although the contrast between Japan and the United Kingdom is now the most stark. Personal saving rates in South Korea and Taiwan have also been at or even above Japanese levels in recent years, which should

reinforce the view that a reciprocal connection between saving and growth exists, no matter which view of saving behaviour is adopted.

There have been many other attempts to explain national differences in personal saving behaviour and the high Japanese saving rate in particular. Many of these attempts, when tested statistically, have proved inconclusive.

Demography, however, is almost certainly the major explanation of the persistent difference in saving ratios. Japanese personal saving has been relatively high partly because of a low proportion of elderly people over 65. Moreover, a high proportion of the elderly remain in some form of employment to supplement retirement pensions or to save for bequests. In the United States and the United Kingdom, on the other hand, saving was depressed in the 1960s and 1970s, as Table 9, p. 33, shows, by the high proportion of children and in the 1980s by the high participation rate of women in the labour force (which reduces the provision for contingencies). A crude ranking of demographic factors by the OECD, reproduced in Table 10, p. 33, indicates that household saving in the 1980s should have been higher in Japan and Italy than in the United States and Britain. But demography alone is probably not enough to account for saving differences.

Taxation systems may also play a significant, if changing, role (see Table 11, p. 34). Even though the 1986 Tax Reform Act removed some tax incentives to household borrowing, the tax treatment of borrowing has been relatively generous in the United States: it is the only Group of 7 country that, at least until 1990, allowed interest tax relief on some consumer borrowing as well as on mortgage borrowing, including that on a second property.

The United Kingdom has a low limit to tax relief on home mortgages, but the tax system still offers an incentive to home ownership that increases with the level of inflation. Neither the imputed rental income nor the capital gain from home ownership is taxed. The system has contributed to the rise in house prices that has been one factor depressing saving by means of the wealth effect. The Nordic countries also have low saving ratios and offer generous tax treatment of housing and consumer borrowing. Table 11, p. 34, indicates a general connection between personal saving and taxation systems.

Financial liberalisation, by reducing credit rationing and the need to save a down payment, has been influential in many countries, especially in interacting with the rise in asset prices. The U.S. and U.K. markets are probably the freest: because average down payments fell in the 1980s, down payments on first-time home mortgages

Table 9 DEMOGRAPHIC AND SOCIAL FACTORS INFLUENCING HOUSEHOLD SAVING

	Old Age Dependency Ratio[a]	Young Age Dependency Ratio[b]	Participation Rate: > 65	Population Growth	Participation Rate: Women
1962–70					
United States	15.8	49.5	18.7	1.2	45.5
Japan	9.5	37.7	35.8	1.1	56.4
Germany	18.9	35.0	12.4	0.8	48.5
United Kingdom	19.3	36.8	12.8	0.5	49.2
Canada	13.0	54.8	14.3	1.7	—
Australia	13.8	47.4	12.1	1.9	—
Finland	12.7	41.2	8.8	0.3	61.9
1971–80					
United States	16.4	38.8	13.2	1.0	54.1
Japan	11.8	35.4	28.0	1.2	53.5
Germany	22.6	32.5	6.8	0.0	49.4
France	21.5	37.7	8.6	0.8	51.7
United Kingdom	22.4	36.3	8.6	0.1	55.0
Canada	13.4	40.3	9.4	1.2	50.5
Australia	13.9	42.4	8.9	1.3	49.3
Finland	16.0	32.7	10.9	0.4	66.2
Netherlands	16.9	38.8	4.2	0.8	—
Norway	22.7	36.7	15.5	0.4	58.9
Sweden	23.6	31.8	7.5	0.3	67.5
1981–86					
United States	17.7	33.1	10.8	1.0	62.6
Japan	14.5	32.9	25.1	0.6	56.7
Germany	21.7	23.2	3.6	−0.2	50.2
France	20.2	33.0	3.6	0.4	54.7
Italy	19.1	27.3	5.8	0.3	40.4
United Kingdom	23.1	30.2	5.3	0.1	58.8
Canada	14.9	32.3	7.5	0.8	61.1
Australia	15.3	36.6	5.1	1.4	53.3
Finland	18.2	28.8	5.0	0.5	72.7
Netherlands	17.6	30.1	1.8	0.5	40.0
Norway	24.2	32.4	12.8	0.3	68.5
Spain	18.3	37.4	4.9	0.5	32.8
Sweden	26.3	28.7	4.4	0.1	76.7

(a) Population 65 years and over as a percent of the working-age population.
(b) Population under 15 years as a percent of the working-age population.
Source: "Saving Trends and Behaviour in OECD Countries."

Table 10 SOCIODEMOGRAPHIC INFLUENCES ON HOUSEHOLD SAVING, 1981–86

	Old Age Dependency	Young Age Dependency	Participation Rate: > 65	Population Growth	Participation Rate: Women	Expected Ranking	Actual Ranking
US	3	6	6	1	7	6	6
Japan	1	4	7	3	4	3	2
Germany	6	1	1	7	2	2	5
France	5	5	1	4	2	4	3
Italy	4	2	4	5	1	1	1
UK	7	3	3	6	5	7	7
Canada	2	7	5	2	6	5	4

Note: Countries have been ranked according to each of the five sociodemographic variables, with "1" indicating that the country concerned could be expected to have the highest saving ratio on the basis of that variable taken alone and "7" the lowest. The expected ranking is based on the simple average of the five rankings.
Source: "Saving Trends and Behaviour in OECD Countries."

now average about 10 percent in the United States, about half their level in 1980. In the case of building society loans in Britain, the average down payment of first-time buyers has fallen from 26 to 17 percent. In Japan, the average down payment is apparently nearer 40 percent. Financial liberalisation may also explain why people of a given age seem to save less than those of the same age a generation ago; or it may facilitate higher spending by today's generation for other reasons.

Saving incentives exist in some countries—for example, Individual Retirement Accounts in the United States and tax exemption provisions for interest income on small savings in Japan. But in both these cases, research finds that the net effect has been small. However, some research attributes the interesting divergence of saving rates in the United States and Canada in the 1970s and much of the 1980s

Table 11 PERSONAL SAVING RATIOS AND TAXATION

	Average Personal Saving Ratio 1972/88[a]	(1) Interest Tax-free[b]	(2) Consumer Interest Deductible[c]	(3) Mortgage Interest Deductible[c]	(4) Tax-favoured Mortgage Debt Used for Consumption[c]	(5) Tax on Imputed Income of Home Ownership[c]	(6) Capital Gains on Own House[b]
1 Sweden	2.1	N	Y	Y	Y	Y	N [4][d]
2 Norway	2.5	Y (A)	Y	Y	Y	Y	N [10]
3 Netherlands	3.4	N	Y	Y	N	Y	N
4 Finland	3.5	Y (A)	Y	Y (A)	Y	Y	N [2]
5 Switzerland	6.5	N	Y	Y	Y	Y	N
6 UK	6.8	N	N	Y (A)	Y	N	N [1]
7 US	6.8	N	Y[e]	Y	Y	N	Y
8 Spain	9.7	N	N	Y (A)	N	Y	Y[f]
9 Austria	9.7	N	N	Y (A)	N	N	N [10]
10 Australia	10.0	N	N	Y (A)	N	N	Y
11 France	11.7	Y (A)	N	Y	N	N	N
12 Canada	12.6	N	N	N	N	N	Y
13 Germany	12.8	Y (A)	N	N	N	Y	N [2]
14 Belgium	15.3	N	N	Y (A)	N	Y	N
15 Japan	18.6	Y (A)	N	Y (A)	N	N	Y[g]
16 Greece	20.0	Y	N	Y (A)	N	Y	N
17 Italy	20.4	N	N	Y (A)	N	Y	Y

Note: Y = Yes; N = No; A = Allowance.
Number in brackets is number of years house must be owned for capital gains to be exempt.
(a) Norway saving ratio 1975/88.
(b) Source: *Price Waterhouse International Tax Guide*, 1989.
(c) Source: *OECD Working Paper*, No. 67, 1989.
(d) Number in brackets is number of years house must be owned for capital gains to be exempt.
(e) This was phased out in 1990.
(f) Subject to rollover relief.
(g) Diminishing rate depending on period of ownership.

Source: *Greenwell Montagu Weekly Bulletin*, London, March 19, 1990.

to Canada's introduction of a more generous tax treatment of pension contributions.

Other factors thought to explain Japan's relatively high saving rate include the need to make greater provision for contingencies owing to the larger element of variable bonuses in Japanese wages. Apparently, there are also differences in culture, including greater risk aversion (judging by the high proportion of liquid assets in Japanese personal wealth) and a dislike of borrowing. These factors may be the result of income instability, however. As noted above, Japanese parents are said to be more willing than parents in other industrial countries to provide for bequests, relatively expensive marriage celebrations and university education for their children. According to unpublished research, American families of Japanese extraction save nearly 5 percent more than the average U.S. family. It is not known whether this figure has been adjusted for demographic and other factors.

Before 1973, the Japanese social security system was relatively undeveloped, which may have reinforced private saving habits. Today, however, social security provisions are comparable to those in other industrial countries. But the retirement age for private sector employees, which has only in recent years been raised from 55 to 60, is still relatively low by some standards. The need to provide for a long retirement period should stimulate saving; but, as noted, a relatively high proportion of Japanese continue to work after formal retirement, though at a reduced income. Nevertheless, some research attributes significance to the retirement age.

Other factors, such as a more equal distribution of income, tend to hold down Japan's saving rate. So, presumably, did the rise in share and land prices relative to income in the 1980s.

Chapter VII

Outlook

INCREASED PRESSURE ON SAVING

Both the United Kingdom and the United States have passed the peak of new family formation, which will tend to raise their underlying saving rates for a time. In Japan's case, the growing number of elderly is still being offset by a fall in youth dependency, but the increase in the older population will dominate after about 1995. The ratio of people aged 65 and over to those 15 to 64, now about 17 percent, is expected to rise to more than 30 percent by the year 2020. Some forecasts therefore envisage that the Japanese saving rate will be halved by then. At about the same time, the percentage of retired will begin to grow substantially in the United Kingdom and then in the United States, as in most industrial countries, but the effects will be felt first in Japan. The liberalisation of the Japanese financial system should also reduce Japan's personal saving rate.

Thus, a period approaches in which the contrast between the personal saving rates of Japan, on the one hand, and those of North America and the United Kingdom, on the other, will weaken. This should be reflected in the balance of payments pattern even though Japan's investment rate should also fall. But the real problems of the deficit countries will not be eliminated. These nations will have to reduce real spending, relative to output, to finance Japanese (and German) retirement pensions just as they would have to cut real domestic spending if they sought to reduce payment deficits today.

Taking a broad view, demographic changes, particularly the increasing proportion of retired in most developed countries, are expected to reduce household saving ratios within 30 years and to place greater burdens on government finances. Even before the year 2020, the saving rate of the developed world as a whole may fall because of demographic changes in Japan and Germany. The slower growth of the working population will reduce the need to add to the capital stock. However, non-consumption demands are already rising in the form of better training and infrastructure and the investment needs of previously communist countries (where productivity improvements will probably be matched increasingly by higher consumption). The impact of environmental protection costs is less certain, as their effect on profitability could reduce investment and growth. Overall, however, there might still be a net call on resources.

Long-term forecasts are notoriously fallible. The brief discussion above excludes, for example, demographic changes in the less developed world, where youth dependency rates should be falling and saving rates rising. But as the level of high real interest rates at a time of only moderate world cyclical upswing at the end of the 1980s also seems to indicate, the outlook in the industrial world shows considerable pressing demands on the flow of saving once current recessions pass. The "peace dividend" will not bring sufficient relief, especially as much of it will be consumed.

TAX INCENTIVES FOR SAVING

Although higher saving promotes growth, it does not necessarily follow that the government should set out specifically to stimulate private saving as a long-term aim. There are three reasons for this.

First, such a policy would have to assume that the private sector was, in some sense, short-sighted. People in a free society have the right to choose between consumption today and consumption tomorrow. The case for stimulating saving would have to be that people would otherwise tend to underestimate their future liabilities—for example, their retirement needs.

Second, tax subsidies to private saving, if concentrated on specific instruments, tend to distort financial choice as well as, or even instead of, raising total saving. Such distortions—and the inevitable anomalies involved—have welfare costs and may unnecessarily accentuate income inequality.

Third, policies in the 1960s and 1970s designed to subsidise *investment* were inefficient in securing growth, at least in Britain. Until a few years ago, Britain obtained a relatively low rate of growth per unit of investment. The weakness was capital's low productivity and profitability rather than the level of investment as such; and the stimulus to investment, without any corresponding increase in saving, helped produce recurrent balance of payments deficits.

Despite these objections, however, a valid argument may exist in favour of a saving subsidy to the poor, if they tend to rely on state assistance in adversity, particularly in retirement. The argument is that poor people who rely on the state will indeed tend to be short-sighted and overestimate the adequacy of state assistance. This may be so especially when calls on government revenue are heavy, which will be the case in many countries when the workers-to-population ratio falls. There are also social grounds for encouraging people to take responsibility for their future. Insofar as the poor do not pay income tax, subsidising their saving alone would require special

schemes, such as the provision of vouchers transferable into designated saving instruments.

The case for directing attention to private saving in general is not controversial if existing policy actually discriminates against saving. For example, if interest on borrowing is tax deductible when the income from goods purchased is not taxed, this policy represents a subsidy to borrowing and spending.

The most general question, however, concerns the underlying basis of taxation. Any system, like the income tax system, which taxes the return on assets bought by using saving from income already taxed discriminates against saving compared with a system which does not. The alternative is to tax expenditures rather than income or, if this is not practicable apart from the use of sales or value-added taxes, to provide tax relief for designated forms of saving.

Such alternatives to an income-based system undoubtedly attract opposition on the grounds that they are administratively cumbersome or favour the rich. They are also opposed on the ground that priority should be given to reducing marginal rates of income tax (to strengthen work incentives), which would mean removing existing tax reliefs on saving. Nevertheless, especially if marginal income tax rates are not discouragingly high, framing tax reliefs to stimulate saving has merit in a world in which demands on saving are likely to be pressing. The alternative of widening the income tax system to bring all forms of income under its net in order to reduce tax rates would bring its own serious administrative problems; the income of life insurance and pension funds, for example, would have to be allocated to individuals.

The tax treatment of pension funds is analogous to an expenditure tax. Life insurance (on which tax relief is no longer provided on new policies in Britain) could be treated in a similar way—tax relief for premiums and investment income but with payments to policyholders bearing tax. The British Personal Equity Plan (PEP) and the Tax Exempt Special Savings Accounts (TESSA) schemes provide tax relief on saving, even though relief is delayed. Tax reliefs can be equivalent whether they are front-ended or back-ended.

All tax relief schemes, however, provide saving incentives only for those with incomes above the tax-paying minimum. In any case, in many countries there is little coherence in tax policy with regard to saving because of the demands on revenue, the pressure of particular groups, and the confusion between a more overt expenditure tax approach and tax reliefs for the relatively rich. The withdrawal of life insurance relief and the limitation of pension scheme relief in Britain represent an anti-saving tax approach, whereas the PEP and

particularly the TESSA schemes were expressly introduced to stimulate saving. In both the United States and the United Kingdom, the tax treatment of housing continues to distort asset choice and, certainly in the United Kingdom when economic conditions are buoyant, depresses the saving ratio through the wealth effect.

Whether the tax system works against saving in the corporate sector is not clear. The real tax rate on corporate profits is raised by inflation if depreciation for tax purposes is based on historical cost, and the same is true of inventory profits. But inflation also raises the tax "shield" on interest, in that companies are allowed to charge against taxable profits an interest rate that includes an element of capital repayment in real terms. Moreover, the tax system will tend to favour retentions if the effective tax on dividend income is higher than that on capital gains, as was the case in the United States before 1986. No simple generalisations, therefore, can be made about corporate saving, although inflation is likely to raise the real tax burden.

Chapter VIII

Summary and Conclusions

DETERMINANTS OF SAVING

Private saving behaviour is explained by the difference between current and future consumption needs and the ratio of wealth to income.

The rise in measured *private* saving rates of the leading industrial economies in the 1970s and their subsequent fall were due mainly to the oil price shock, which reduced the real value of private wealth and led to a more uncertain outlook for employment and income beginning in 1973 and again in 1980–81.

Concern with the fall in private saving ratios in the 1980s turned out to be excessive. Private saving rates have been relatively stable and are close to, in some cases above, the levels of the 1960s. The fall in real oil prices in 1990 removed the earlier damage to industrial profitability and saving; both *corporate* saving and investment were helped by a cyclical upswing, though with different timing in individual countries. Anxiety about the apparently low level of *personal* saving in some countries has therefore been unnecessary. The low personal saving of the United Kingdom, however, undoubtedly contributed to its high inflation.

The widespread drag on *total* saving rates in the 1980s was really the fall in *government* saving, which had dropped in most countries in the 1970s (though less so on an inflation-adjusted basis). This became negative in many countries in the 1980s and has remained so in the United States and Canada. By contrast, government saving has become positive in the United Kingdom and Germany and especially in Japan. Government investment rates have also fallen in most countries, mainly to bring government deficits under control.

Some economists have argued that a fall in government saving may actually stimulate private saving by making people save more to meet a perhaps inevitable increase in taxes. Evidence for this is hard to find, except in extreme cases where government debt ratios are very high.

On an OECD measurement basis, a more consistent measurement than the use of conventional figures, personal saving rates have recovered to or even risen above the levels of the 1960s in the countries discussed here, with the exception of the United Kingdom, where the ratio has been dramatically low until very recently.

PAYMENTS DEFICITS

Anxiety about the supposed fall in personal saving in the United States as a cause of the U.S. payments deficit is unjustified. Instead, it is necessary to point to the fall in the 1980s in government saving compared with the 1960s and 1970s.

The liberalisation of capital markets has facilitated capital flows, making it more possible for current account deficits and surpluses to persist. By definition, these imbalances must involve domestic saving-investment gaps.

Until recently, the emerging pattern of payments balances could be explained mainly by a fall in the investment rates of Germany and Japan and a fall in the saving rates of the United States, Canada and the United Kingdom.

After 1986–87, however, the rise in private investment also restricted the fall in the U.S. payments deficit. In the United Kingdom, the rise in investment was the entire counterpart to the development of its large payments deficit; the rise in government saving offset the fall in private (mainly personal) saving.

Fears of the dollar's collapse, so far at least, have been unjustified, partly because of international financial liberalisation, which has loosened the tie between domestic saving and investment. Moreover, the U.S. payments deficit has been falling in relation not only to U.S. GNP but also to the saving of the rest of the world.

In any case, concern with current account deficits when these do not reflect only high inflation is in important respects misplaced. Countries with a relatively high rate of return on capital are justified in being net importers of capital. International differences in personal saving behaviour, too, are inevitable, if only for demographic reasons and because growth rates differ. Saving rates generally became more varied in the 1980s.

Except in the special case where the growth of a non-inflationary country is limited by its inability to finance imports of capital goods or materials, concern with the payments deficit is more properly directed toward whether it will lead to a collapse in the exchange rate that will jeopardise anti-inflationary policy. When a payments deficit is the result of relatively low private saving (in an average-inflation country), there is probably less risk of a fall in the exchange rate than occurs when a payments deficit reflects low government saving. Private lending terms react to changes in perceived creditworthiness, although not necessarily fast enough to remove the need for government policy measures. There is a greater risk that markets will come to expect a government to solve its debt problems through inflation.

Therefore, because the U.S. payments deficit reflects a government as well as a private sector deficit, it will remain a cause for concern when the current recession passes.

Maintaining a payments deficit would eventually make the United States a net foreign debtor and particularly vulnerable to high interest rates if they exceeded the growth of GNP; in that case, the ratio of debt to GNP would rise still further. Most of this strain would fall on the government sector. Even though the United States is probably not yet a net debtor in current values, it may have a net excess of short-term foreign debt over short-term foreign assets, where net interest outgoings react quickly to changes in world interest rates.

On the other hand, the entire counterpart to the United Kingdom's payments deficit has been a private sector deficit. Both are falling as the economy declines—corporate investment is falling and the personal saving ratio is rising. But a fairly large payments deficit is likely to persist when a normal rate of growth is resumed because government saving is falling.

FACTORS INFLUENCING INTERNATIONAL SAVING DIFFERENCES

Various factors have been suggested as causes of international differences in personal saving rates in general and of the relatively high saving rate of Japan in particular. Japan's high saving has helped keep real interest rates relatively low, thus stimulating growth in the Japanese economy.

Perhaps the most important factor has been relative demographic structure and the high proportion of middle-aged people in Japan. Other explanations include the more generous tax treatment of household borrowing and home ownership in the United States and the United Kingdom; the freer credit markets of North America and the United Kingdom; the greater element of uncertain bonuses in Japanese incomes; the earlier retirement age in Japan; and Japanese culture, which provides for children's university education and marriages. Japan's higher growth rate itself probably encourages saving, for it eventually leads to a demand for a correspondingly greater increase in wealth to maintain a particular wealth ratio. (High saving rates also exist in the high growth countries of South Korea and Taiwan.)

Demographic changes, particularly the increasing proportion of the elderly, will probably reduce personal saving in Japan, perhaps by one-half between 1995 and 2020. Loosening capital markets

should also work in the same direction. To that extent, the contrast between the saving rates of Japan, the United States and the United Kingdom should fade.

However, to conclude that the world saving scene is becoming satisfactory would be to give international payments imbalances a degree of importance they do not merit in a world of mobile capital. Payments imbalances certainly cannot be ignored, because there probably is a limit to how much investors in a surplus country will accept the risks attached to a concentration of claims on a deficit country. The real question facing the United States is its willingness to reduce its consumption to remove the risk of a sharp fall in the dollar and higher inflation. As Japan's saving falls, the U.S. balance of payments could improve, but only if the United States is willing to transfer the real resources needed to finance the consumption of the elderly in Japan, which is actually the same problem in another form.

After about the year 2020, the proportion of retired people will also be rising in the United Kingdom and the United States. To the extent that this reflects a lower population growth rate, the need for saving will be reduced as well, as a lower growth of capital stock will be required. But other large non-consumption calls on output are arising in the form of environmental protection costs, infrastructure improvement, better education and training in the United States and Britain, and the likelihood of higher investment in infrastructure and modernisation in previously communist countries. The "peace dividend" is unlikely to meet this increase in demand for saving, as much of it will be consumed.

The rise in real interest rates to high levels throughout the West before the Gulf War may have been partly a consequence of these pressures on the demand for resources as well as a reflection of cyclical factors.

The extent to which governments should positively stimulate private saving is a controversial question. The case for subsidising the saving of the relatively poor is that they are likely, for example, to overestimate the future extent of state pension benefits, especially when state resources are heavily tapped, as will happen when the working population ratio falls.

At the very least, present trends justify the removal of any drag on private saving, especially in North America and Britain. If high interest rates indeed reduce the saving of the over-65 because the elderly target a given expenditure to save, this aspect will become all the more important as that proportion of the population increases.

Factors inhibiting personal saving include tax relief on consumer borrowing (in the United States until 1990) and on home ownership.

A general case also exists for shifting more of the burden of personal taxation to an expenditure basis, by relieving a wide range of saving from taxation through either front-end relief or relief on the return from assets acquired. There is, however, little coherence in personal taxation policy with respect to saving.

Measurement problems cloud the interpretation of saving levels and trends. For example, an adjustment for the inflation element in interest rates would reduce both the increase in measured private saving ratios and the fall in government saving ratios in the 1970s. Other adjustments, such as those for the purchase of consumer durables and for the accounting definitions of corporate profits, would soften the contrast between the private saving ratios of Japan, on the one hand, and the United States, Canada and the United Kingdom, on the other. A significant contrast would remain, however.

Appendix

Definitions of Saving

When measuring aggregate or sector saving, both conceptual and practical difficulties are encountered. Some important conceptual questions, such as the treatment of the inflation element in interest payments, concern the distribution of saving among sectors. Others, such as whether purchases of consumer durables and education should be treated as consumption or investment, also affect total saving and investment calculations.

Most measures of investment and saving reflect not only concepts but also practical necessity. Other defensible measures would in some respects give a different international comparison from that discussed above.

CORPORATE AND GOVERNMENT SAVING

With respect to the corporate and government sectors, for example, expenditure on education and training in investment might be included, as well as expenditure on research and development besides the element of plant and buildings. It also might be right to include some part of defence spending, which is treated as current expenditure, in investment. The effect of these revisions would be to reduce U.S. consumption, raise its saving and investment correspondingly, and soften the contrast with Japan. The relative effect on the United Kingdom is less clear.

PERSONAL SAVING

The relative level of personal saving would also be raised if purchases of consumer durables were treated as investment because they provide a future stream of service, as do other assets. One aspect of this concerns the purchase of cars: if bought by households, they are universally treated as consumer goods, whereas if bought by businesses but made available to households, they are treated as investment.

If purchases of all consumer durables were treated as investment and saving, OECD estimates suggest that personal saving in the United States, as a percentage of GNP, would have been raised from 10 to 21 percent in 1987, while that of Japan would have been increased from 15 to about 20 percent, removing the difference

between the two countries. A rough adjustment would have raised the United Kingdom's ratio from 4 to about 14 percent.

Whether the purchase of consumer durables should be treated as investment and added back to saving depends partly on the focus of analysis. If the primary concern is the connection between saving and total demand, or with the resources available for productive investment, consumer durable expenditure can be treated as current consumption. But if saving as the means of providing a future stream of services is the greater concern, expenditure on consumer durables should be treated as investment and added back to saving.

The treatment of pension funds is also a problem. In some countries, such as the United States and the United Kingdom, these funds are important elements in personal saving, whereas in others they occur only in the public sector and may be impossible to isolate from social security funds in general. How far personal saving is reduced because of the existence of the government provision of pensions is not clear.

Finally, the question remains whether capital gains should be included in income and saving and whether income and saving should also be adjusted to allow for the inflation element in interest. The latter adjustment would increase the saving of governments and most corporations, as net debtors, and reduce the saving of households, as net creditors.

Whereas the adjustment for consumer durables would narrow the GNP between Japanese, U.S. and U.K. personal saving rates, the other possible adjustments would have the opposite effect.

GROSS VERSUS NET SAVING

The discussion so far has been based entirely on gross measures of saving, i.e., without deducting capital consumption. A comparison of net saving ratios, using OECD estimates, is shown in Appendix Table 1.

Saving ratios have fallen more on a net than on a gross basis. Depreciation of fixed capital in OECD countries is estimated at 60 percent of fixed capital stock in the 1980s as opposed to 40 percent in the 1960s. The difference is due not to any shorter life today of assets of a given type, but to an increase in the proportion of capital stock in the form of short-life equipment relative to that of long-life buildings.

Appendix Table 1 presents a particularly sharp contrast between the net saving ratios of the United States and the United Kingdom, on the one hand, and Japan, on the other. It is somewhat softened if

Appendix Table 1
GROSS AND NET SAVING RATIOS

	1960-70	1971-80	1981-88	1988
TOTAL SAVING				
GROSS (As a Percentage of Gross National Product)				
US	19.6	19.5	16.1	15.2
Canada	21.8	23.1	20.3	21.1
Japan	35.0	34.4	31.4	33.5
France	26.3	25.4	19.8	20.5
Germany	27.3	23.7	22.2	24.6
Italy	21.0	19.2	15.6	20.7
UK	19.6	21.7	16.8	18.2
NET (As a Percentage of Net National Product)				
US	10.6	8.9	3.7	3.3[6.5]
Canada	11.3	13.3	9.4	10.5[12.4]
Japan	25.6	24.6	20.4	22.0[14.4]
France	19.3	16.3	8.2	9.2[8.6]
Germany	19.9	14.3	11.1	13.9[11.7]
Italy	15.0	12.1	7.5*	[2.0]
UK	11.1	7.7	5.6	5.2[6.6]

* 1981–85.

Note: Figures in brackets represent private sector net saving ratios.
Source: "Saving Trends and Behaviour," OECD, 1990.

only the private net saving ratios (shown in brackets) are examined. Where the private sector net ratios are higher than national net ratios, as in the United States, Canada and the United Kingdom, the implication is that government net saving has been negative.

Even so, the private sector net saving ratios of the United States and the United Kingdom appear small. However, adjustments for capital consumption are notoriously unreliable, and in some respects do not do justice to these two countries. In both, estimates of depreciation provisions are made on a replacement cost basis, whereas in Japan they are available only on a historical cost basis. Adjusting for this difference might reduce Japan's net private saving ratio by 4–5 percent. Furthermore, it is questionable whether full allowance has been made for the scrapping of plant in the United Kingdom during the sharp recession of 1980–81.

Nevertheless, the relatively high level of net and gross saving in Japan and Germany remains whether total or private saving is taken, unless only those statistical adjustments are made that would reduce the contrast, which in most respects would not be justified.

Selected Bibliography

Ando, A., and Modigliani, F. "The Life Cycle Hypothesis of Saving." *American Economic Review.* March 1983.

Ball, R.J., and Drake, Pamela S. "The Relationship Between Aggregate Consumption and Wealth." *International Economic Review.* January 1964.

Barro, Robert J., and Martin, Xavier Sala i. *World Real Interest Rates.* Harvard University Working Paper No. 227. April 1990.

Dean, Andrew, et al. "Saving Trends and Behaviour in OECD Countries." In *OECD Economic Studies.* Spring 1990.

Feldstein, M., and Horioka, C.Y. "Domestic Saving and International Capital Flows." *Economic Journal.* June 1980.

Hayashi, F. "Why Is Japan's Saving Rate So Apparently High?" in S. Fisher, *NBER Macroeconomics Annual.* 1986.

Horioka, C.Y. *Why Is Japan's Household Saving Rate So High?* Institute of Social and Economic Research, Osaka University. April 1989.

Hurd, Michael D. "Research on the Elderly: Economic Status, Retirement, and Consumption and Saving." *Journal of Economic Literature.* June 1990.

Kawasaki, K. *Japanese Saving: A Survey of the Literature.* OECD Economics and Statistics Department. January 1990.

Modigliani, F. "The Debate Over Stabilization Policy." Cambridge: Cambridge University Press, 1986.

OECD. "Alternative Measures of Saving." *Brookings Papers on Economic Activity No. 2.* 1987.

Poterba, James M. "Tax Policy and Corporate Saving." *Brookings Papers on Economic Activity No. 2.* 1987.

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